

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PHILLIP R. RIDENOUR, SUZANNE M. ZAMPALONI

Appeal No. 2000-1922
Application No. 08/806,494

HEARD: March 21, 2002

Before HAIRSTON, RUGGIERO, and BLANKENSHIP, Administrative
Patent Judges.

RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal from the final rejection of claims 1-3, 5-7, 9, and 10. Claims 4 and 8 were canceled earlier in the prosecution. An amendment filed September 1, 1998 after final rejection, which canceled claims 2 and 6, was approved for entry by the Examiner. Accordingly, only the rejection of claims 1, 3, 5, 7, 9, and 10 is before us on appeal.

The claimed invention relates to an apparatus for reducing bearing contaminant migration from a cartridge bearing assembly of a hard disc drive actuator assembly. A retention disc is affixed to a portion of the cartridge bearing sleeve adjacent the bearing assembly to form a retention chamber adjacent the bearing assembly. A circular flange is provided at the inner diameter of the retention disk and substantially in parallel with the stationary shaft of the bearing assembly. The retention disc flange and the stationary shaft cooperate to form a labyrinth seal creating an intricate passageway to minimize the migration of contaminants from the retention chamber to the interior environment of the disc drive.

Representative claim 1 is reproduced as follows:

1. A cartridge bearing assembly, comprising:

a stationary shaft having an outer diameter;

a bearing assembly having an inner race and an outer race, the inner race rigidly affixed to the outer diameter of the shaft;

a rotatable cartridge bearing sleeve rigidly affixed to the outer race of the bearing assembly; and

a retention disc comprising:

an outer diameter rigidly affixed to the cartridge bearing sleeve;

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an inner diameter proximate to the outer diameter of the shaft; and

a flange, disposed at the inner diameter of the retention disc, the flange extending in a direction substantially parallel with the stationary shaft and toward the bearing assembly;

wherein the retention disc, the cartridge bearing sleeve, the bearing assembly and the stationary shaft form a retention chamber for receivingly retaining contaminants generated by the bearing assembly, and wherein the flange and a portion of the stationary shaft adjacent the flange form a labyrinth seal, the labyrinth seal minimizing the egress of contaminants from the retention chamber.

The Examiner relies on the following prior art:

Yasui et al. (Yasui)	5,403,098	Apr. 04, 1995
Krum et al. (Krum)	5,482,381	Jan. 09, 1996

Claims 1, 3, 5, 7, 9, and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Krum in view of Yasui.¹

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the Brief (Paper No. 14) and Answer (Paper No. 16) for the respective details.

OPINION

¹ The Examiner has withdrawn the 35 U.S.C. § 112, second paragraph, rejection of claim 10 indicating (Answer, page 3) that the entry of the September 1, 1998 amendment obviates the rejection.

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We have carefully considered the subject matter on appeal, the rejection advanced by the Examiner and the evidence of obviousness relied upon by the Examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellants' arguments set forth in the Brief along with the Examiner's rationale in support of the rejection and arguments in rebuttal set forth in the Examiner's Answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 1, 3, 5, 7, 9, and 10. Accordingly, we reverse.

With respect to independent claims 1 and 5, the Examiner proposes to modify the disk drive bearing assembly disclosure of Krum. According to the Examiner ((Answer, page 6), Krum discloses the claimed invention except that Krum's retention disc (identified as washer seal 90 by the Examiner) lacks "a flange, disposed at the inner diameter of the retention disc,..." as claimed. To address this deficiency, the Examiner turns to Yasui which describes a flanged retention disc for a

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bearing assembly to enhance lubricant and contaminant retention.

In the Examiner's analysis (id.):

one of ordinary skill in the art would have been motivated to provide the retention disc flange as taught by Yasui ... to the retention disc of Krum ... in order to enhance lubricant and contaminant (i.e., leaking lubricant) retention while minimizing the infiltration of foreign matter into the bearing assembly, as contrasted with a retention disc without the flange, as ***explicitly suggested*** by Yasui....

After reviewing the arguments of record from both Appellants and the Examiner, we are in general agreement with Appellants' position as stated in the Brief. In particular, we agree with Appellants (Brief, page 13) that the Krum reference, when considered in its entirety, teaches away from the Examiner's proposed combination. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. See W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1548, 220 USPQ 303, 311 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

In discussing the top portion of the bearing assembly which includes the washer seal retention disc 90, Krum minimizes the concern with leakage of bearing lubricant. As stated at column

4, lines 59-61, of Krum, "[i]t is, thus, very unlikely that actuator bearing lubricant will find its way through the gap 94 between the washer seal 90 and the pivot shaft 18." As further indicated in Krum (column 4, lines 62-63), the situation is different at the bottom of the bearing assembly. In this lower portion of the bearing assembly, Krum felt the need to utilize a labyrinth seal 14 in the form of an incorporated structure within E-block 64 to address the problem of lubricant and contaminant migration. In our view, it is apparent that, although Krum was aware of labyrinth seals since one was used at the bottom of the bearing assembly, there was no concern or any recognition of any problem at the top of the bearing assembly where the washer seal 90 is located that would have required the use of a labyrinth seal. It is our opinion that any suggestion to modify the washer seal 90 of Krum to include a flange and create a labyrinth seal as proposed by the Examiner could only come from Appellants' own disclosure and not from any teaching in the applied Krum and Yasui references.

In summary, we are left to speculate why one of ordinary skill would have found it obvious to alter the applied prior art to make the modification suggested by the Examiner. The only

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reason we can discern is improper hindsight reconstruction of Appellants' claimed invention. In order for us to sustain the Examiner's rejection under 35 U.S.C. § 103, we would need to resort to speculation or unfounded assumptions or rationales to supply deficiencies in the factual basis of the rejection before us. In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968), rehearing denied, 390 U.S. 1000 (1968).

Accordingly, since we are of the opinion that the prior art applied by the Examiner does not support the obviousness rejection, we do not sustain the rejection of independent claims 1 and 5, nor of claims 3, 7, 9, and 10 dependent thereon. Therefore, the

Examiner's decision rejecting claims 1, 3, 5, 7, 9, and 10 under 35 U.S.C. § 103(a) is reversed.

REVERSED

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KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOSEPH F. RUGGIERO)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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JUDGE RUGGIERO

APPEAL NO. 2000-1922

APPLICATION NO. 08/806,494

APJ RUGGIERO

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DECISION: **REVERSED**

PREPARED: Nov 15, 2002

OB/HD

PALM

ACTS 2

DISK (FOIA)

REPORT

BOOK